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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,636	10/06/2003	Jeff Owl	9051-000002-	3919
27572	7590	06/06/2005	EXAMINER	
COZART, JERMIE E				
HARNESS, DICKEY & PIERCE, P.L.C.		ART UNIT		
P.O. BOX 828		PAPER NUMBER		
BLOOMFIELD HILLS, MI 48303		3726		

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/679,636

Applicant(s)

OWEL, JEFF

Examiner

Jermie Cozart

Art Unit

3726

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
 Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(e). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-643)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 1/7/04
- 4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 23, 28, and 46. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: On page 2, paragraph [0006], lines 1-2, the sentence is not grammatically correct because "a" in its first occurrence on line 2 is not the correct word, and it is therefore it is suggested to change "a" to - -and - -; On page 4, paragraph [0013], line 7, "18" is not the appropriate reference character, and therefore "18" in should be changed to - -18a - -; On page 6, paragraph [0018], line 1, "18" is not the appropriate reference character, and therefore "18" in should be changed to - -18a - -. Appropriate correction is required.

Claim Objections

3. Claim 2 is objected to because of the following informalities: In claim 2, line 1, "the" followed by "each" is grammatically incorrect, and it is suggested to delete "the"; In claim 3, line 2, "comprises" does not coincide with the tense of the phrase, therefore it is suggested to change "comprises" to - comprising- -. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 11-13 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the second robot being configured to position the component, does not reasonably provide enablement for the second robot being configured to position the component in a position so as to allow the fastening of a second weld fastener welder. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. Therefore, it is unclear as to how this positioning allows the fastening of a second weld fastener welder.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention. In claim 1, it is unclear if there are more than one type of reader being claimed.

8. Claim 14 recites the limitation "the optical reader" in line 9 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1, 15, 16, 19, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Madden et al. (6,516,239).

Madden discloses an apparatus comprising a conveyor system (216) having an input portion located prior to work station (12) and an output portion located right after work station (16), a plurality of work stations (12, 16), each workstation having an associated robot and weld fastener welder (col. 14, line 62 – col. 15, line 17), an optical reader (134D) positioned adjacent the input portion, and a controller (206) operatively connected to the reader, conveyor, the robots, and the fastener welder, the controller (206) being operable to activate one of a plurality of software loops upon based on a first signal received from the optical reader. The control loop functions to control the movement of a least one robot and at least one weld fastener welder. A first work

station has a first robot and a first weld fastener welder, and a second work station has a second robot and a second weld fastener welder configured to weld studs to an outer surface of the component. See column 7, line 8 – column 16, line 28, and figures 1A – 2 for further clarification.

Note that the recitation for presenting and processing components stored in stackable trays has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Note that configured to weld studs to an outer surface of the component, is a recitation of the intended use and a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tachibana (6,591,488) in view of Sugito et al. (6,256,868) and Oatridge et al. (6,360,421).

Tachibana discloses an apparatus for presenting and processing components stored in stackable trays (7), wherein the apparatus comprises a conveyor system (1, 42) having an input and an output portion (i.e. the beginning and end of the conveyor), a plurality of work stations (4). Tachibana discloses a first tray location being a first work station (4), and a second tray location being a second work station (4). Tachibana discloses a controller (i.e. computer system which is not shown) that controls the production system on the basis of a predetermined control program. *See column 3, line 3 – column 7, line 14, and figures 1-6 for further clarification.*

Tachibana, however, does not disclose the following: a reader positioned adjacent the input portion; each workstation having an associated robot and weld fastener welder; an optical reader positioned adjacent the input portion; and a controller operatively connected to the reader and the fastener welder, the controller being operable to activate one of a plurality of software loops upon based on a first signal received from the optical reader; each stackable tray comprising an indicia indicative of

what components are found within the stackable tray and wherein the controller functions to initiate a first control pattern based upon the type and number of components within the stackable tray; a first stackable tray comprises a first indicia and a second stackable tray comprising a second indicia, the controller configured to take the first stackable tray into the input portion and read the indicia, the controller further configured to move the first stackable tray to a first tray first location; the first work station comprises a first robot and a first weld fastener welder; the first robot being configured to remove components and position them in an orientation so as to allow the welding of a weld fastener; the first fastener welder fastening a weld fastener to an exterior surface of the component; the second work station comprising a second robot and a second weld fastener welder; the second robot being configured to position the component in a position so as to allow the fastening of a second weld fastener welder; the second weld fastener welder being configured to weld a second weld fastener to a second location on the component; the second fastener welder being configured to weld a third fastener to a third location on the component; the first weld fastener welder being configured to weld a fourth weld fastener onto a second location on the component; the control loop functions to control the movement of a least one robot and at least one weld fastener welder; the conveyor being configured to move the first and second stackable trays to one of the work stations in response to instructions from the controller.

Sugito discloses an optical reader (i.e. reading device not shown, inherently optical since indicia is provided by circuitry) positioned adjacent the input portion (i.e.

position near robot 11), each stackable tray (12) comprising an indicia (125) indicative of what components are found within the stackable tray and wherein the controller (not shown) functions to initiate a first control pattern based upon the type and number of components within the stackable tray (12). The first stackable tray (12) comprises a first indicia (125) and a second stackable tray (12) comprises a second indicia (125). The controller configured to take the first stackable tray into the input portion and read the indicia, to move the first stackable tray to a first tray first location, the conveyor (15) being configured to move the first and second stackable trays to one of the work stations in response to instructions from the controller. *See column 7, line 13 – column 10, line 35, and figures 6-12 for further clarification.*

Oatridge discloses each workstation having an associated robot (150) and weld fastener welder (20'), wherein a first work station comprises a first robot (150) and a first weld fastener welder (20'). The first robot (150) is configured to remove components and position them in an orientation so as to allow the welding of a weld fastener. The first fastener welder (20') fastens a weld fastener to an exterior surface of a component, and a second work station comprises a second robot (150) and a second weld fastener welder (20'). The second robot (150) is configured to position the component in a position so as to allow the fastening of a second weld fastener. The second weld fastener welder (20') is configured to weld a variety of fasteners at different locations on the component. A control loop functions to control the movement of a least one robot and at least one weld fastener welder. *See column 4, line 6 – column 11, line 14, and figures 1-4 for further clarification.*

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Tachibana by performing the following: provide each workstation with an associated robot and weld fastener welder; provide an optical reader positioned adjacent the input portion of Tachibana's system; operatively connect the controller of Tachibana to the reader and the fastener welder, wherein the controller is operable to activate one of a plurality of software loops upon based on a first signal received from the optical reader; provide each stackable tray of Tachibana with an indicia indicative of what components are found within the stackable tray and wherein the controller functions to initiate a first control pattern based upon the type and number of components within the stackable tray, wherein a first stackable tray comprises a first indicia and a second stackable tray comprising a second indicia; configure the controller of Tachibana to take the first stackable tray into the input portion and read the indicia; further configure the controller to move the first stackable tray to a first tray first location; provide the first work station with a first robot and a first weld fastener welder, wherein the first robot is configured to remove components and position them in an orientation so as to allow the welding of a weld fastener, and the first fastener welder fastens a weld fastener to an exterior surface of the component; provide the second work station with a second robot and a second weld fastener welder, wherein the second robot is configured to position the component in a position so as to allow the fastening of a second weld fastener and wherein the second weld fastener welder is configured to weld a second weld fastener to a second location on the component; configure the first and second fastener welders to weld subsequent fasteners to different locations on the

component; and to configure the conveyor to move the first and second stackable trays to one of the work stations in response to instructions from the controller. All of these modifications are performed in light of the respective teachings of Sugito and Oatridge, in order to expand or reduce line equipment according to the size of a production volume and improve the accuracy of subsequently assembled components.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references cited on the attached PTO-892 are cited to show assembly lines.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jermie Cozart whose telephone number is 571-272-4528. The examiner can normally be reached on Monday-Thursday, 7:30 am - 6:00 pm.

15. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

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have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Jermie S. Cozart". The signature is fluid and cursive, with the first name "Jermie" being more prominent.

Jermie Cozart
Examiner
Art Unit 3726

JC
June 1, 2005